

No. —

# PRACTICAL PLANS

FOR

## DISTRICT SCHOOL HOUSES,

FOR THE USE AND GUIDANCE OF

School Boards and Officers.



BY

A. N. DABB,

School Architect and Engineer of Heating and Ventilating.

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AND

*"Every Article for the School Room."*

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## GENERAL SPECIFICATIONS.

### MASON'S WORK.

Cellar, 2 feet deep, to be dug under the entire building; trenches for foundations and piers, 6 inches deeper; earth to be graded around the outside of wall, one foot high, and sloping from building on all sides.

Foundation walls, and piers for centre girders, to be of rubble stone, laid up solidly in mortar; to be one foot thick and 6 feet high, from cellar bottom to under side of sills. Stone piers, 3 feet deep, to be built to support posts of outside steps.

Chimney flues to be of brick, 12 inches square on inside, built on strong brackets. Inside walls to be plastered—two coats, and whitewashed.

### Carpenter's Work.

TIMBER.—Sills and Girder,  $4 \times 8$ ; Floor-beams,  $3 \times 8$ ; Posts,  $6 \times 6$ ; Window Studs and Plates,  $4 \times 6$ ; Filling-in-Studs,  $2 \times 6$ ; Inside Partition Studding,  $2 \times 4$ —doubled around doors; Ceiling Joists,  $2 \times 8$ ; Rafters,  $3 \times 6$ ; Floor-bridging,  $2 \times 3$ . Rafters and ceiling joists to be strongly trussed with plank. The outside of walls and roof to be sheathed with hemlock boards. Corner boards and siding to be of pine. Roofs covered with A 1 sawed shingles; Valleys, &c., flushed with tin. Roofs to project 3 feet, ceiled with narrow boards to under side of rafter; brackets to be 4 inches thick—solid. Cornice to be

moulded, and tin or zinc gutters and leaders put up. Outside steps  $1\frac{1}{2}$  inch thick, enclosed with 1 inch narrow worked beaded pine, finished with 6 inch pine posts and  $3 \times 4$  hand rails. Sashes  $1\frac{1}{2}$  inch thick, hung with cords and weights in  $1\frac{1}{2}$  inch pine box frames. Porches and ventilating belfries to be built as shown in the drawings. Floors to be of Norway pine,  $1\frac{1}{2}$  inch. Window and door casings to be  $4\frac{1}{2}$  inches wide, with  $2\frac{1}{2}$  in. back moulding. Doors to be  $1\frac{1}{2}$  inch thick, 4 panels, hung with loose butts and strong rim locks, and opening outwards. School-room windows to have plain *inside* rolling blinds; wardrobe windows to have the glass frosted or painted on inside. Wardrobes to be wainscoted with narrow pine beaded boards, 6 feet



high. The School-room to be wainscoted 3 feet high, and the Vestibules 4 feet high. Ventilating shafts to be made of worked boards, started from the floor, continued up through the attic into the belfry. Each shaft to have two openings, one near floor and one near ceiling, each closed with small shutters, hung at the lower edge, opening into the shaft, and worked with cords. A plain corner, iron enamelled wash basin to be put in, with waste pipe of lead or tin. Teacher's closets and libraries to be fitted up with all necessary shelving. Build a trap-door and stairs to cellar, in boys' wardrobe. Two water-closets to be built, each  $4 \times 6$  feet; vaults to be 5 feet deep, laid up with dry stone wall, to be circular, 4 feet inside diameter: hemlock frame, pine siding, shingle roof, battened doors—each with lock; inside to be divided, with two seats in each division.

All materials to be of good quality, and the work done in the strongest and most substantial manner.

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### Location & General Remarks.

The ground selected should be high and dry, easy of access, and, if possible, should not be less than one acre. The building should be placed in the centre, the cellar dirt thrown up around it, and the lot graded from the building to the edges of the lot; no surface hollows should be left for water to lay in. The lot should be enclosed in a neat, substantial fence, and divided at the rear by a division fence, to keep the boys and girls separate. The water-closets should be placed in the rear angles of the lot.

A number of shade trees should be planted in the front of the lot, and also in the play-grounds. Every School-house should have a cellar under it. The building will last almost twice as long, as the timber will keep dry. A place *must* be provided for wood and coal, and a cellar costs no more than a wood-shed, and requires no repairs.

Wardrobes should always open into the School-room, and not into halls or vestibules, as is generally the case. Where they open into the room, the clothing is under the supervision of, and it cannot be taken or injured without the Teacher being aware of it.

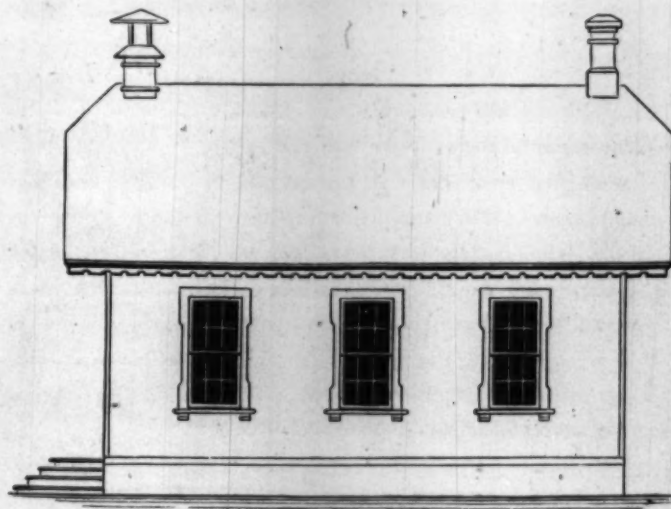
In regard to the estimates of cost accompanying these plans, any of them can be modified so as to reduce the cost from 10 to 25 per cent. below the estimates given. Should none of these plans suit, the Architect has a large assortment of others, all of which are at our service. We have also arranged with him to furnish any of our customers with all necessary information in regard to the best and newest methods of School building, heating, lighting, ventilation, furnishing, &c. All correspondence on these subjects will be referred to him, and answered as promptly as the nature of the questions will permit.

A popular error exists in the method of arranging seats in a School-room. They are generally placed the largest in the rear of the room, ranging to the smallest, which occupy the front. A much more desirable plan, and one which of late has been adopted by our best schools, is that of having only one size of desk in each row. For example, let the two outside rows be of a size for largest pupils, the centre row for smaller, or reverse, and place the smaller on the outside, &c.



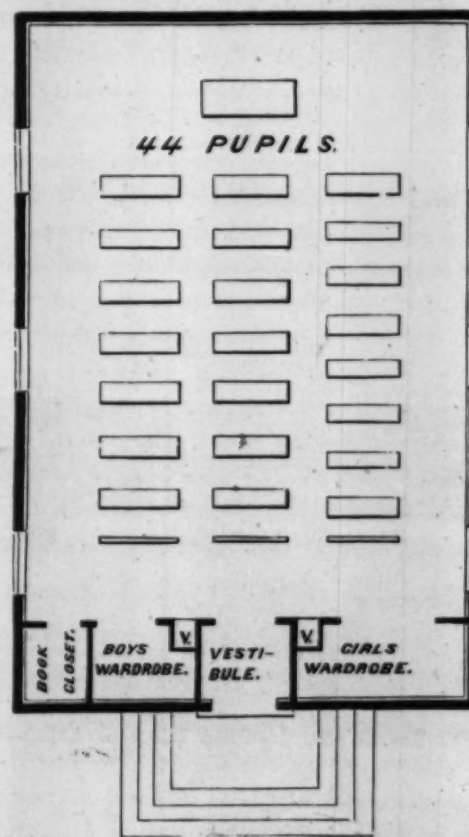


Front Elevation.



Side Elevation.

# DISTRICT SCHOOL HOUSE "A."



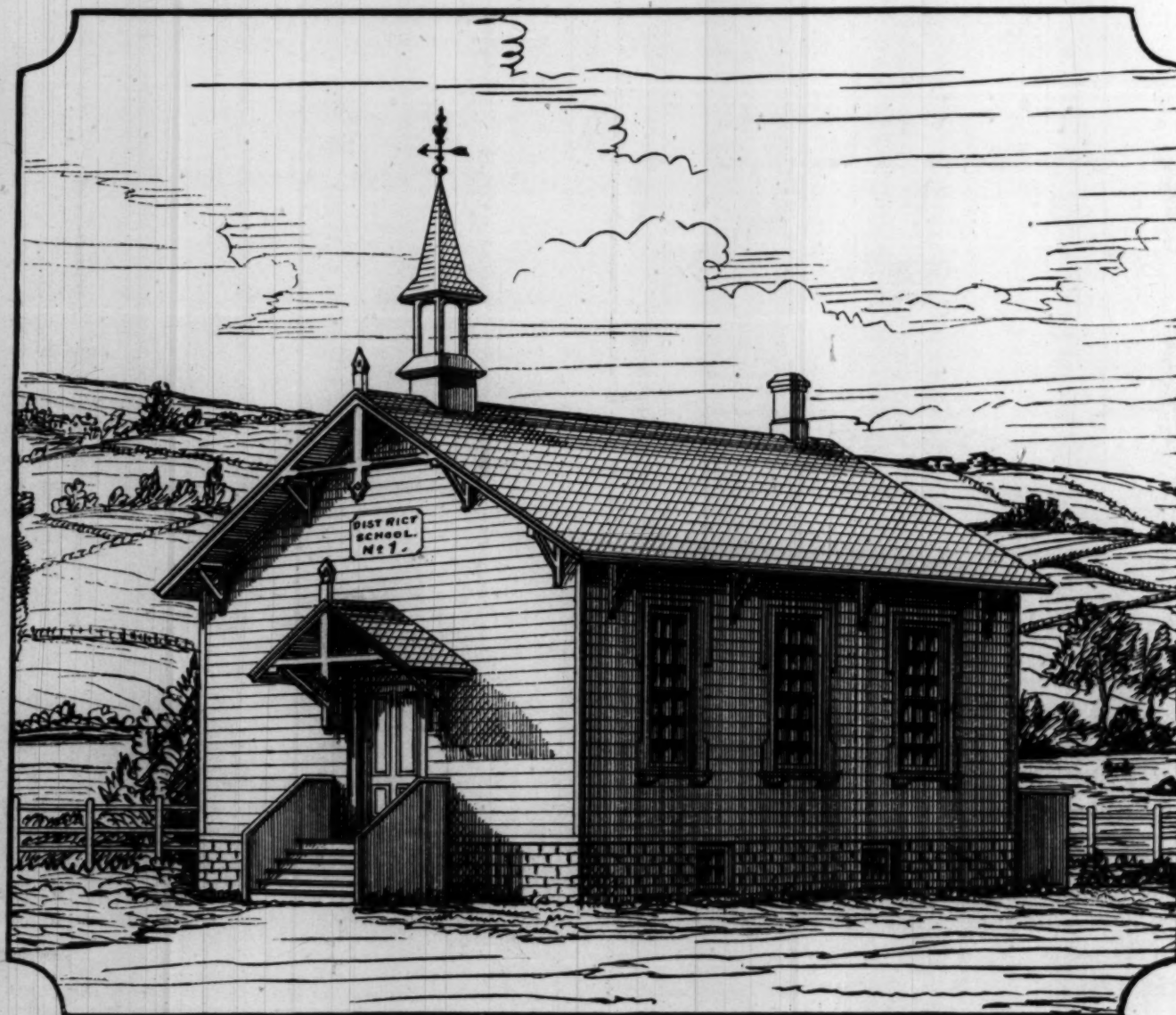
Floor Plan.

## DESCRIPTION OF DESIGN "A."

This is designed for a cheap style of building, everything superfluous being omitted. Its capacity can be changed by adding or taking off two feet in length for every six pupils, more or less, as may be required. The building has no cellar, but is to be built on cedar posts, or piers of wood or stone, and the space below the building boarded up. Floor plan 20 X 28. It is 2½ feet above the ground. Girders and Sills, 4 X 8 inches; Floor Beams, 2 X 8; Posts, 12 feet high. The Rafters are 2 X 6—16 feet long, and are tied 14 feet from the floor with ceiling joists 1½ X 6 inches, supported and stiffened in the centre by stay lath from the rafters. The window glass is 10 X 18—sashes hung; Vestibule doors, 30 X 70; Closet door, 22 X 70. The Wardrobes form arched recesses, without doors. The exterior is not sheathed; the weather boarding, 1 inch thick, is nailed directly to the frame. Bins for fuel are made under the building.

The cost of a building to seat 40 pupils, put up in this style, should not exceed \$700.00.

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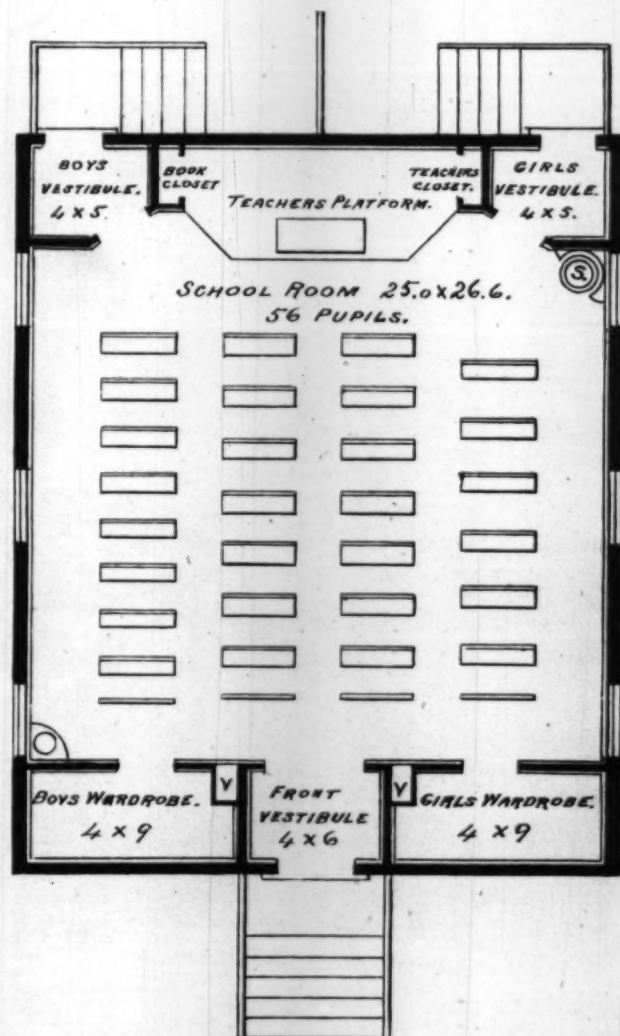


A. N. DABB, Arch't.

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DISTRICT SCHOOL HOUSE No. 1.

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DISTRICT SCHOOL No 1 FLOOR PLAN. 26x32—

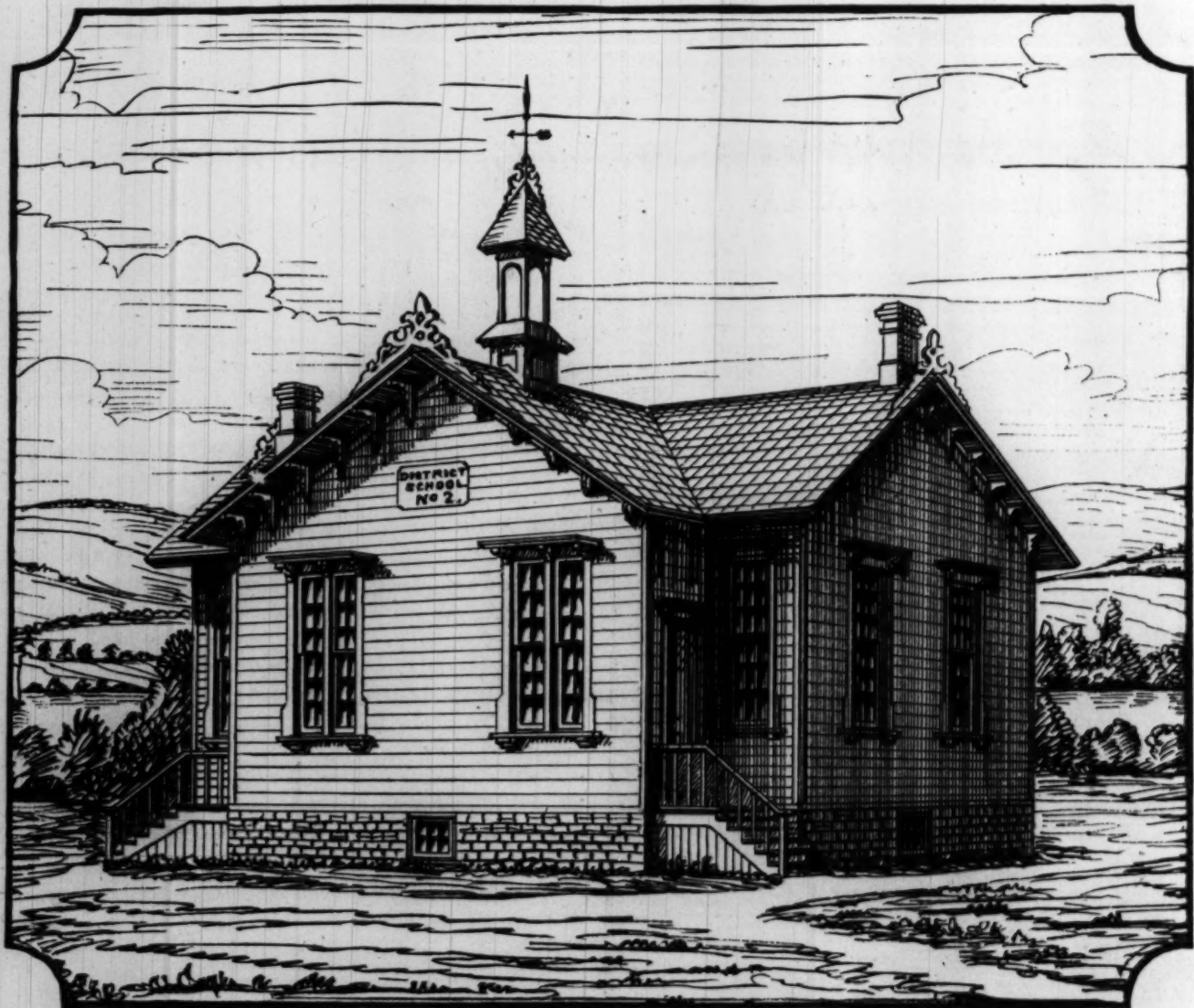
## GENERAL DESCRIPTION.

### *Design 1.*

This building is 26 X 32 feet, and is a very conveniently arranged building. The ceiling is designed to be 14 feet high; 12 feet would, however, make a good height, but the former is the best. The principal entrances are at the rear, the front entrance being designed for visitors, or for the public when meetings are required to be held in the building. The Teacher's platform is at the rear, against a blank wall, which affords space for maps, black board surface, &c. On each side of the platform is a Teacher's closet and book closet—these should be in every school. The wardrobes are large, fitted up with iron clothes hooks; they and the front vestibule are lighted by a head-light over each door. Black boards, 3½ feet high, extend all around the room, above the wainscoting. The outside is neat and tasteful. The roof projects 4 feet, supported by frame brackets; the porch over front door is built to correspond. The ventilating belfry is large and strong enough for a 200 lb. bell. The room will seat 56 pupils, in double seats, as follows, each size in separate row or rows:—16 Primary, 28 Secondary, 12 Grammar. Wall aisles 3 feet, middle aisles nearly 2 feet wide. This building will cost between \$1,100.00 and \$1,300.00, according to locality. In some parts of Pennsylvania it might cost less than the first named sum. This building could easily be enlarged to double its size, and make a double School.



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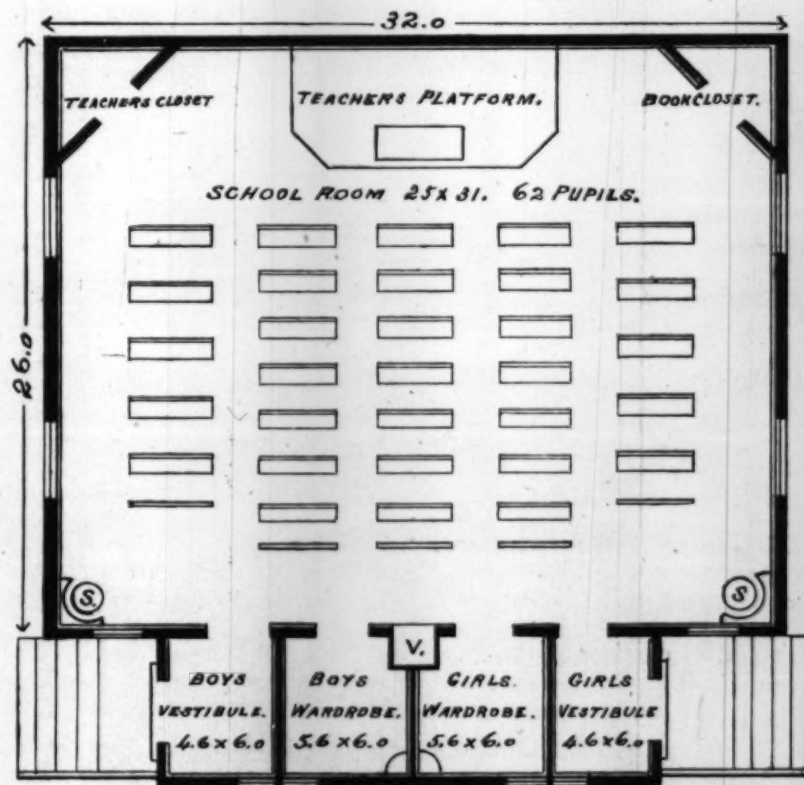
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DISTRICT SCHOOL HOUSE No. 2.

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## GENERAL DESCRIPTION.

### *Design 2.*



DISTRICT SCHOOL NO. 2. FLOOR PLAN.

This building covers more ground than No. 1, and is a large and very convenient building. The main building is  $26 \times 32$  feet, and the front projection, in which are the wardrobes and vestibules, is  $6 \times 20$  feet. The wardrobes are roomy, and open into the School-room immediately adjoining the vestibules. The wardrobes and vestibules are well lighted through the double front windows. The School-room ceiling is 13 feet high, and the room is well lighted from six large windows; the glass in them is  $12 \times 15$  inches. The long blank wall behind the Teacher's platform affords fine space for maps and black boards. The angles of the room are cut off for Teacher's closet and book closet. The wardrobes will be fitted up with clothes hooks. Black boards,  $3\frac{1}{2}$  feet high, will extend all around the School-room, above the wainscoting. The outside presents a good appearance, the three gables making it very attractive. The roof will project 3 feet on all sides, and the cornice will be fitted up with brackets and mouldings. The belfry is similar to the preceding plan, but a little more ornamental. The room will seat 62 pupils, in gothic double desks, each size in separate row or rows, as follows:—14 Primary, 28 Secondary, 20 Grammar. Aisles 2 and 3 feet wide. This building will cost from \$1,400.00 to \$1,600.00, according to locality.



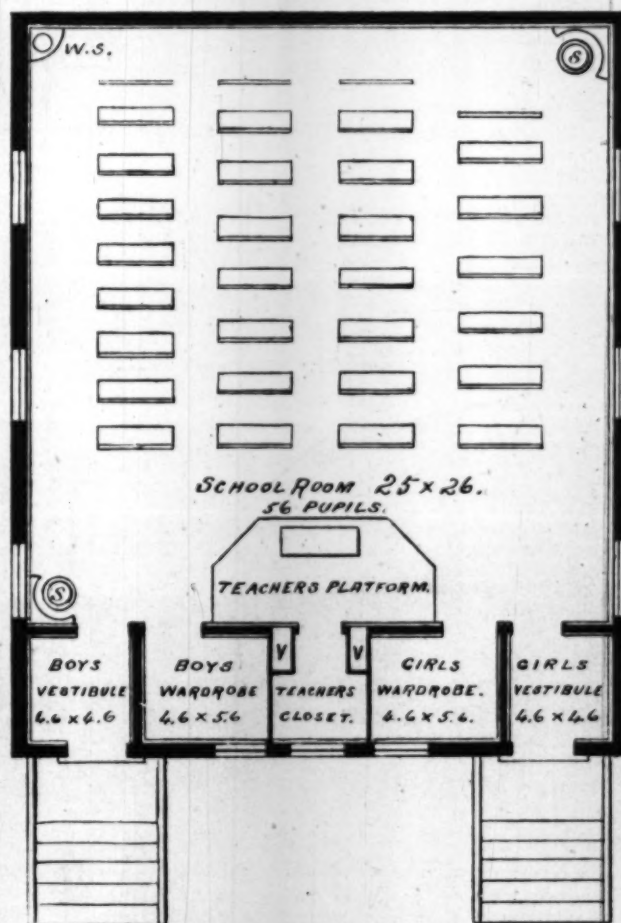
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DISTRICT SCHOOL HOUSE No. 3.

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DISTRICT SCHOOL NO 3. FLOOR PLAN. 26x32.

## GENERAL DESCRIPTION.

### Design. 3.

This building is 26 × 32 feet, ceiling 14 feet high, and is a very commanding building in external appearance. The entrances are at the front, and immediately adjoining them are the wardrobes, properly fitted up with clothes hooks. The two wardrobes are separated by a closet for the Teacher's use, for books, &c. In this plan the Teacher's platform is placed in the front, near the doors. This arrangement is preferred by many Teachers. If otherwise, the platform could be placed against the rear wall, where there would be more blank wall for black boards, &c. Black boards extend all around the room, as in the previous plans. A wash-stand is also placed in one of the rear corners. The wardrobes and closet are well lighted. The vestibules are lighted by fan-lights over the front doors. The windows have 12 × 15 glass. The roof projects three feet on all sides, supported by sawn brackets. The belfry is large and imposing, but is easily built. The doors are well protected by the porches, supported on brackets. This building will seat 56 pupils, each size desk in separate row or rows, as follows:—16 Primary, 28 Secondary, 12 Grammar. By adding two feet to its length it will seat 64. This building would also look well if built long enough for two rooms. The cost of this building, as shown, will be from \$1,400.00 to \$1,600.00.

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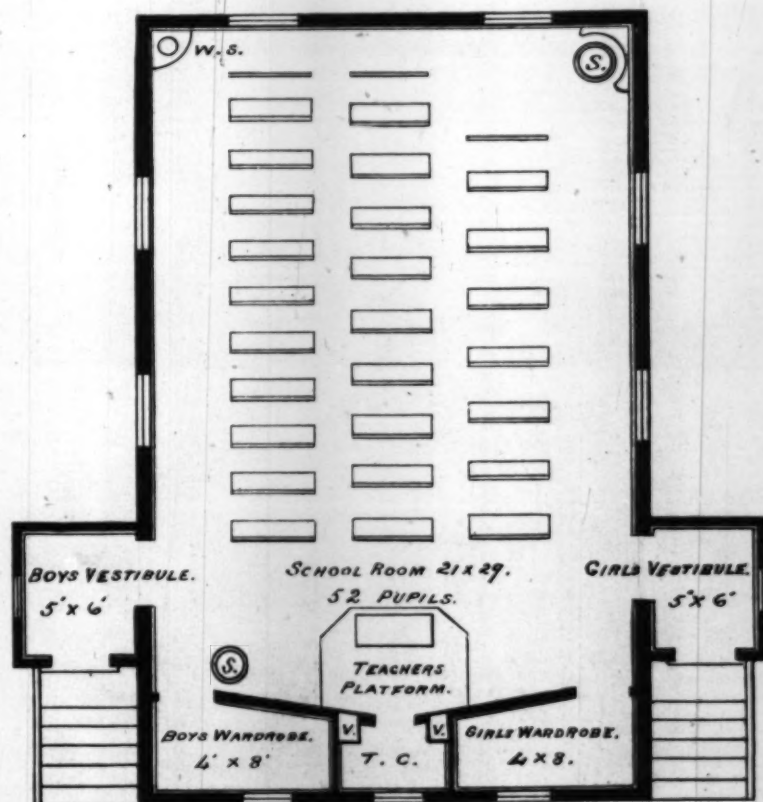


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DISTRICT SCHOOL HOUSE No. 4.

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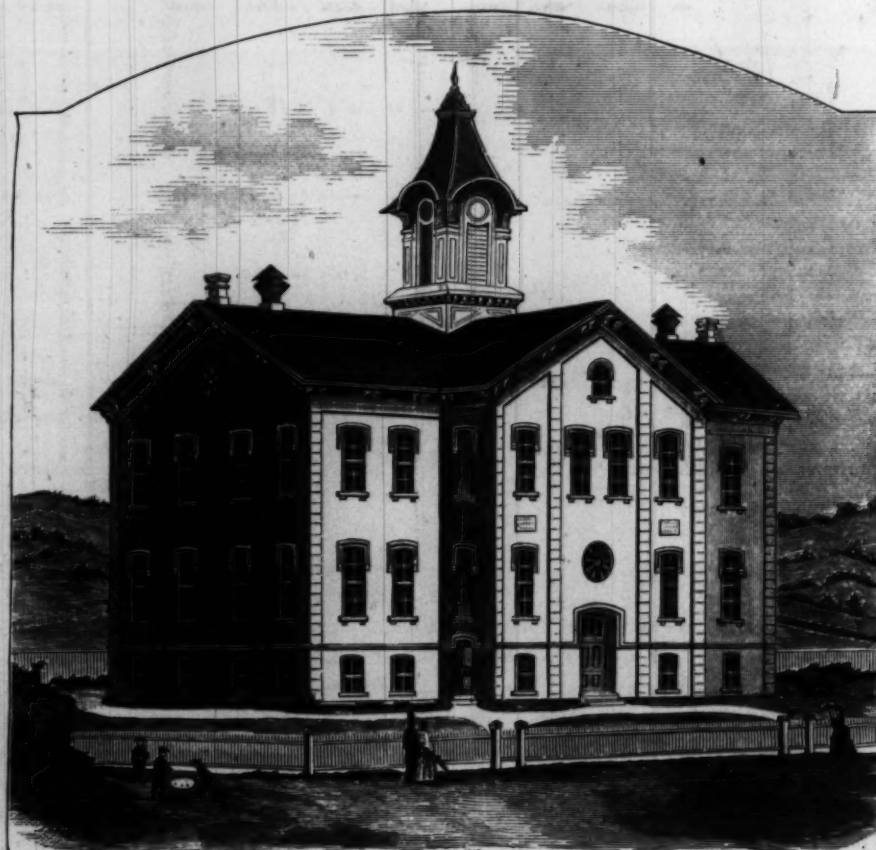
DISTRICT SCHOOL No 4, FLOOR PLAN. 22 X 34 feet.

## GENERAL DESCRIPTION.

### *Design 4.*

This building is 22 X 34 feet, and the projections on the sides give variety to its appearance. It is not so stiff or formal in its style. This building could be enlarged sufficiently for two rooms, and make a very handsome building. The ceiling of this School-room is 14 feet high. The vestibules are light and roomy, and are convenient of access to the wardrobes; these are fitted up the same as the preceding plans. Between the two wardrobes is the teacher's closet. The School-room is lighted by six windows—glass, 12 X 15. Black boards extend all around the School-room. A wash-bowl is placed in the rear corner. The roof projects 3 feet on all sides; the gables are ornamented with open timber work. The roof of vestibules extends forward a sufficient distance to form a porch over front steps. This building will seat 52 pupils, as follows, each size desk in a row:—20 primary, 18 secondary, 14 grammar. This number could be enlarged by lengthening the building. This building will cost from \$1,350.00 to \$1,575.00, according to locality.





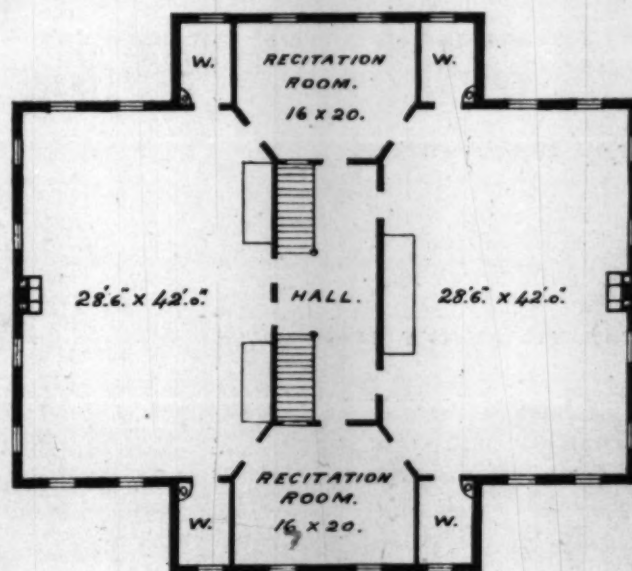
*Public School at Mt. Joy, Pa.—Erected 1873.*

*A. N. DABB, Arch't.*

DISTRICT SCHOOL HOUSE, No. 12.

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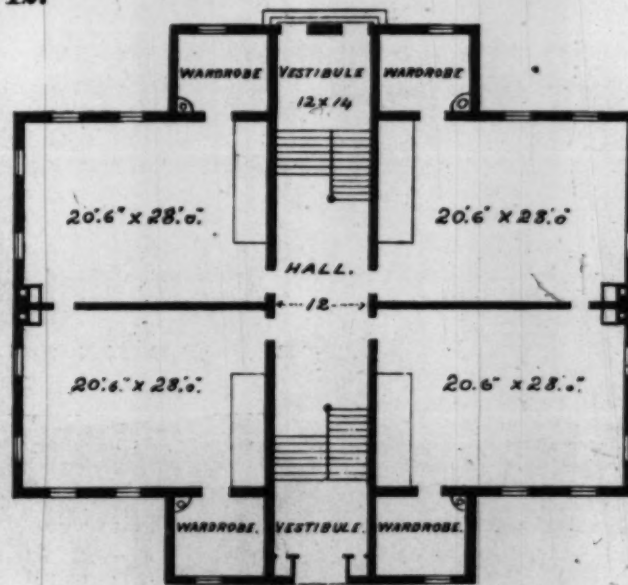
No. 12.



SECOND FLOOR.

GENERAL DESCRIPTION.

The building is of brick, and is strongly and substantially built. It is two and a half stories in height, and is covered with a slate roof. The belfry or tower is seventy-five feet high, and contains a very rich, fine-toned bell, weighing eleven hundred pounds. The basement or half story is all above ground, and is divided into three sections, one of which is used by the girls, and another by the boys, as a play-ground in cold or stormy weather. The third section contains fuel rooms and two furnaces, which heat the building very thoroughly. The basement story is nine feet high, and is well lighted. The first floor contains four good school-rooms, each seating fifty-four pupils, and the second floor has two large rooms, each seating ninety-six pupils, and in connection with these two rooms are two large recitation rooms, each capable of seating thirty-six pupils. All the school-rooms have large wardrobes attached to them; by this arrangement the putting on or off of clothing is under the direct supervision of the teacher, and the destruction of clothing and confusion of a general cloak-



FIRST FLOOR.

room avoided. In each wardrobe is a cast-iron wash-bowl and water-cooler, thus supplying each room with good drinking water, and also with the means of cleanliness. There are two large stairways in the building, and with the three outside doors opening from the hall, and the four doors in the basement, the building could be emptied without confusion in three or four minutes, in case of a panic. All outside doors open outward. The rooms are wainscoted three feet high, and black-boards occupy every available space on the walls of each room. The room ceilings are 14 and 15 feet high, and great pains have been taken to ensure thorough ventilation. Each room is lighted from the sides and rear, and no pupil sits facing the light, (which, by the way, is a common source of short sightedness.) The building, exclusive of heating apparatus and furniture, costs about \$14,800.00, and is designed to accommodate four hundred pupils. It is furnished throughout with the improved and popular Gothic Furniture of J. A. Bancroft & Co., Philadelphia. For beauty, comfort and durability, in this respect, it is unsurpassed by any school building in the country.

## NEW AND DISTINCTIVE FEATURES OF OUR DISTRICT SCHOOL FURNITURE,

*Which will repay careful consideration.*

### The Gothic Curved-Back Desk,

WITH FOLDING SEAT AND FOOT REST.

1st.—This Desk is admitted to be the most comfortable of any. The Curved Back and Seat were designed by Prof. Cutter, the eminent physiologist, and are true to anatomical principles: the inclination of the former and the curve of the latter are so correct that they conform exactly to the person of the occupant, and force the pupil to an easy, upright and healthy position.

3d.—A valuable improvement makes this Desk the Most Recent and perfect in the market.

3d.—The Desk is provided with an Adjustable Foot Rest, shown in the engraving, which affords a most enjoyable relief from the fatigue of sitting. The pupils being more comfortable when their feet are on the Rest, *keep them there*, thus preventing the noise from constant scraping on the floor. These Foot Rests contribute as much to the ease of the pupils as the Foot Rests in Railway Cars contribute to the comfort to the traveler. They are found in our Desks alone, and are a feature with us.

4th.—A perfect noiseless seat hinge is used, with Three Stops, and no strain on the bolt, [which



for actual use could be dispensed with entirely.) This is the case with no other Desk, wherein a bolt is used in the seat joint, and is a peculiar feature of *extreme importance*.

5th.—The seat, when folded, almost meets the back of the Desk, but never touches it, and allows the spaces between each desk to form almost as free passage way as in the aisles, and entirely unimpeded by Any Projection Whatever.

6th.—In folding or opening the Seat, it is impossible to catch the clothing, pinch the fingers, or otherwise cause discomfort.

7th.—The Iron in the Castings is so distributed, as to secure the greatest possible strength where the most pressure comes, while the proportions of the Desk and ornamented Gothic Castings are tasteful and elegant. In addition, We Guarantee every casting we send out. By actual test, they have sustained a weight of over 1000 pounds, without injury.

8th.—The Castings have a very wide, continuous flange, for the better attachment of the wood—broad base,—and a greater number of screw holes for the floor. The patent Non-corrosive Ink Well and Cover is supplied, and is the best known.

9th.—An extra wide Book Shelf will be noticed in the engraving. The Desk is the Best Finished in the U. S., while the sizes will be found larger than the corresponding grades of others.

10th.—By special points of merit, partially given here, we have endeavored to make this Desk of More Value to our customer, at the same time making our list prices less than others.

THE GOTHIC DESK has been adopted annually, for Four successive Years, in the Philadelphia Public Schools, and over 20,000 Seats are now in use. Scores of thousands are now in use throughout the Middle States, and the demand is constantly increasing.



## NEW AND DISTINCTIVE FEATURES OF OUR DISTRICT SCHOOL FURNITURE,

*Which will repay careful consideration.*

### The Gothic Inclined-Back Desk, WITH FOLDING SEAT.

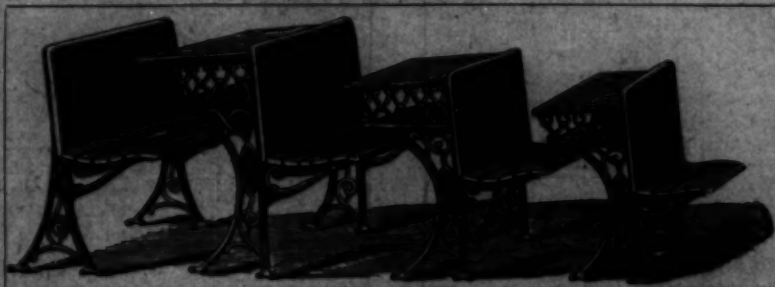
This Desk, in appearance, comfort and strength resembles closely, and is similar to the Gothic Curved Back Desk, as before. Quality and sizes are the same. The back is not so decided in curvature, but is inclined at an angle which, with the curved seat, conforms to the shape of the body, and is extremely comfortable. The Foot Rest is



omitted, as well as the Patent Silvered Ink Well and Cover, an ornamented iron one being furnished in its place. The handsome and strong castings, with compact folding curved seat and wide shelves, will be specially noticed. For a medium priced Patent Desk this is unsurpassed, and is fully guaranteed.

### The Patent Standard Desk, WITH CURVED SEAT.

This handsome Desk has been constructed with special reference to providing a substantial, comfortable and compact Desk for District Schools, at or near the cost of the ordinary "Home-made" or Pine Furniture, but far superior in durability, comfort and appearance. It has all the advantages in Curved Seat, Inclined Back, Wide



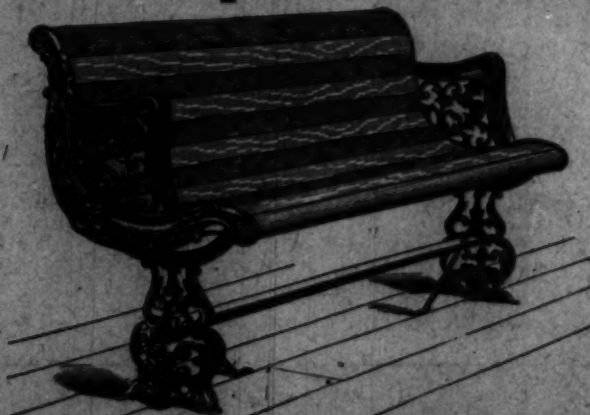
Shelf, and Handsome Castings, that are incorporated in the Gothic Patent Desks as before. The sizes are precisely the same. In cases where the funds are limited, this will be found to be specially adapted, and is positively the Strongest Desk in the market. The Iron Frames can be readily Re-wooded, and will last for generations.

- For full description, sizes, &c., of our Furniture and Apparatus, please send for our descriptive Catalogues of same.  
For the opinions of those, of whom you know, as to actual School Room Test of our Desks, send for "A Few Appropriate Words," &c.

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Do not fail to examine full descriptive catalogue before deciding on other styles.

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